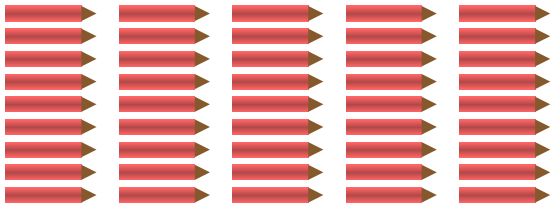
TIMES TABLES

A TIMES TABLES

Discover: Each box can hold 9 pencils, and there are 5 boxes ready to be filled.
Hugo wants to find out the total number of pencils needed to fill all the boxes.
Can you help Hugo?



Answer: Hugo starts by adding 9 five times, like this:

$$9+9+9+9+9$$

However, this takes time. Instead, he uses the times table for a quicker method.

$5 \times 0 = 0$
$5 \times 1 = 5$
$5 \times 2 = 10$
$5 \times 3 = 15$
$5 \times 4 = 20$

As $5 \times 5 = 25$, $5 \times 9 = 45$.

$5 \times 6 = 30$
$5 \times 7 = 35$
$5 \times 8 = 40$
$5 \times 9 = 45$
$5 \times 10 = 50$

So, Hugo will need 45 pencils to fill all the boxes. This example shows why learning the times table is helpful.

Definition **Times Table**

A **Times Table** is a list that shows the results of multiplying one number by the numbers from 0 to 10.

Ex: Calculate 4×9 given the times table of 4

$4 \times 0 = 0$
$4 \times 1 = 4$
$4 \times 2 = 8$
$4 \times 3 = 12$
$4 \times 4 = 16$
$4 \times 5 = 20$
$4 \times 6 = 24$
$4 \times 7 = 28$
$4 \times 8 = 32$
$4 \times 9 = 36$
$4 \times 10 = 40$

Answer: In the times table of 4, we find $4 \times 9 = 36$.

B TIMES TABLE OF 2

Discover: How many eyes are there ?

Answer: You can count by 2s: 2, 4, 6, 8, and 10. So, there are $5 \times 2 = 2 + 2 + 2 + 2 + 2 = 10$ eyes.
We can calculate more quickly with

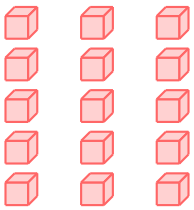
$$\begin{aligned} 5 \times 2 &= 2 \times 5 \\ &= 5 + 5 \\ &= 10 \end{aligned}$$

Proposition **Times Table of 2**

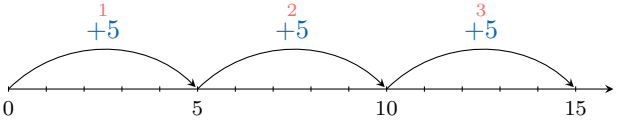
$2 \times 0 = 0$	$0 \times 2 = 0$
$2 \times 1 = 2$	$1 \times 2 = 2$
$2 \times 2 = 4$	$2 \times 2 = 4$
$2 \times 3 = 6$	$3 \times 2 = 6$
$2 \times 4 = 8$	$4 \times 2 = 8$
$2 \times 5 = 10$	$5 \times 2 = 10$
$2 \times 6 = 12$	$6 \times 2 = 12$
$2 \times 7 = 14$	$7 \times 2 = 14$
$2 \times 8 = 16$	$8 \times 2 = 16$
$2 \times 9 = 18$	$9 \times 2 = 18$
$2 \times 10 = 20$	$10 \times 2 = 20$

C TIMES TABLE OF 5

Discover: How many cubes are there if we count by 5s?



Answer: You can count by 5s: 5, 10, and 15 cubes.



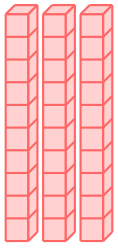
There are $3 \times 5 = 5 + 5 + 5 = 15$ cubes.

Proposition **Times Table of 5**

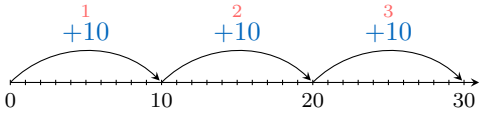
$5 \times 0 = 0$	$0 \times 5 = 0$
$5 \times 1 = 5$	$1 \times 5 = 5$
$5 \times 2 = 10$	$2 \times 5 = 10$
$5 \times 3 = 15$	$3 \times 5 = 15$
$5 \times 4 = 20$	$4 \times 5 = 20$
$5 \times 5 = 25$	$5 \times 5 = 25$
$5 \times 6 = 30$	$6 \times 5 = 30$
$5 \times 7 = 35$	$7 \times 5 = 35$
$5 \times 8 = 40$	$8 \times 5 = 40$
$5 \times 9 = 45$	$9 \times 5 = 45$
$5 \times 10 = 50$	$10 \times 5 = 50$

D TIMES TABLE OF 10

Discover: How many cubes are there if we count by 10s?



Answer: You can count by 10s: 10, 20, and 30 cubes.



There are $3 \times 10 = 10 + 10 + 10 = 30$ cubes.

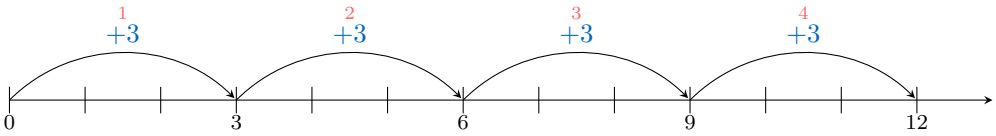
Proposition **Times Table of 10**

$10 \times 0 = 0$	$0 \times 10 = 0$
$10 \times 1 = 10$	$1 \times 10 = 10$
$10 \times 2 = 20$	$2 \times 10 = 20$
$10 \times 3 = 30$	$3 \times 10 = 30$
$10 \times 4 = 40$	$4 \times 10 = 40$
$10 \times 5 = 50$	$5 \times 10 = 50$
$10 \times 6 = 60$	$6 \times 10 = 60$
$10 \times 7 = 70$	$7 \times 10 = 70$
$10 \times 8 = 80$	$8 \times 10 = 80$
$10 \times 9 = 90$	$9 \times 10 = 90$
$10 \times 10 = 100$	$10 \times 10 = 100$

E TIMES TABLE OF 3

Discover: How many bananas are there?

Answer: You can count by 3s: 3, 6, 9, and 12 bananas.



There are $4 \times 3 = 3 + 3 + 3 + 3 = 12$ bananas.

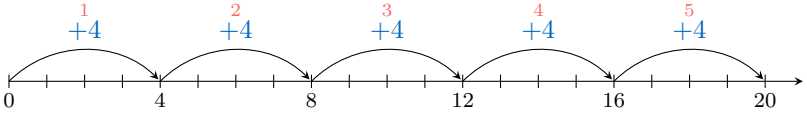
Proposition Multiplication table 3

$3 \times 0 = 0$	$0 \times 3 = 0$
$3 \times 1 = 3$	$1 \times 3 = 3$
$3 \times 2 = 6$	$2 \times 3 = 6$
$3 \times 3 = 9$	$3 \times 3 = 9$
$3 \times 4 = 12$	$4 \times 3 = 12$
$3 \times 5 = 15$	$5 \times 3 = 15$
$3 \times 6 = 18$	$6 \times 3 = 18$
$3 \times 7 = 21$	$7 \times 3 = 21$
$3 \times 8 = 24$	$8 \times 3 = 24$
$3 \times 9 = 27$	$9 \times 3 = 27$
$3 \times 10 = 30$	$10 \times 3 = 30$

F TIMES TABLE OF 4

Discover: Each butterfly has 4 wings. How many wings are there?

Answer: You can count by 4s: 4, 8, 12, 16, and 20 wings.



There are $5 \times 4 = 4 + 4 + 4 + 4 + 4 = 20$ wings.

Proposition Multiplication table 4

$4 \times 0 = 0$	$0 \times 4 = 0$
$4 \times 1 = 4$	$1 \times 4 = 4$
$4 \times 2 = 8$	$2 \times 4 = 8$
$4 \times 3 = 12$	$3 \times 4 = 12$
$4 \times 4 = 16$	$4 \times 4 = 16$
$4 \times 5 = 20$	$5 \times 4 = 20$
$4 \times 6 = 24$	$6 \times 4 = 24$
$4 \times 7 = 28$	$7 \times 4 = 28$
$4 \times 8 = 32$	$8 \times 4 = 32$
$4 \times 9 = 36$	$9 \times 4 = 36$
$4 \times 10 = 40$	$10 \times 4 = 40$